

consumer.

BRIEF SUMMARY OF THE INVENTION

Applicant has unexpectedly produced an encapsulated
5 product, comprising:

a) a therapeutically-effective amount of a
pharmaceutical;

b) at least one compressible material;

c) at least one lubricating material; and

10 d) wherein said product is in the form of a caplet
having a diameter from about 1 millimeter to about 7 millimeters
and a length from about 1 millimeter to about 7 millimeters.

In a preferred embodiment, the pharmaceutical incorporated
into the encapsulated product is selected from the group
15 consisting of: antibiotics, antitussives, antihistamines,
decongestants, alkaloids, mineral supplements, laxatives,
antacids, ion exchange resins, anti-cholesterolemics,
antiarrhythmics, antipyretics, analgesics, appetite
suppressants, expectorants, anti-anxiety agents, anti-ulcer
20 agents, anti-inflammatory substances, coronary dilators,
cerebral dilators, peripheral vasodilators, anti-infectives,
psychotropics, antimanics, stimulants, gastrointestinal agents,
sedatives, anti-diarrheal preparations, anti-anginal drugs,
vasodialators, anti-hypertensive drugs, vasoconstrictors,
25 migraine treatments, antibiotics, tranquilizers,
anti-psychotics, antitumor drugs, anticoagulants, antithrombotic
drugs, hypontics, anti-emetics, anti-nausants, anti-convulsants,
neuromuscular drugs, hyper- and hypoglycemic spasmodics, uterine
relaxants, mineral and nutritional additives, antiobesity drugs,
30 anabolic drugs, erythropoetic drugs, antiashmatics, cough
suppressants, mucolytics, anti-uricemic drugs and mixtures
thereof.

An advantage of method of the inventive subject matter is that no heat nor moisture is required for forming the encapsulated product. High levels of active ingredients are obtainable in the products of the inventive subject matter, even though heat or moisture is not required for forming the encapsulated product. In addition, the encapsulated product of the present inventive subject matter has a uniform active ingredient content and may be strong enough to withstand mechanical pressure both in the processing of the product, and in the chewing of the product in the mouth so that the active ingredients are released in the stomach.

DETAILED DESCRIPTION OF THE INVENTION

The encapsulated product of the present invention is a caplet containing a surprisingly high amount of an active ingredient. Applicant has unexpectedly determined that pharmaceuticals can be entrapped by adsorption and compressed with high load into a small encapsulated product. The void space of the resultant product is very low, particularly when polyols are used as the compressible material, as will be discussed hereinafter.

In a preferred embodiment of the present invention, the encapsulated product of the present inventive subject matter is a caplet shaped like a capsule and having a diameter from about 1 millimeter to about 7 millimeters and a length from about 1 millimeter to about 7 millimeters. Preferably, the diameter of the encapsulated product is about 3 millimeters and the length is about 3 millimeters. The caplets may be coated with a thin surface film to protect the product from moisture or water absorption, and from heat and rupture during processing and chewing.

The alternative method of preparing an encapsulated product

of the present inventive subject matter contemplates converting liquid active ingredients into small dry caplets or capsules. Powder materials are also available for conversion using the novel method of the inventive subject matter. The novel method
5 is a simple compression process for compacting high levels of active ingredients into a small piece size.

As used herein, the term "active ingredient" includes pharmaceuticals and medicaments.

As used herein, the expression "mammal" includes without
10 limitation any mammalian subject, such as mice, rats, guinea pigs, cats, dogs, human beings, cows, horses, sheep or other livestock.

The amount of active material present in the inventive compositions will vary depending on the particular active used, but generally will be present in an amount of about 0.001% to
15 70% by weight of the composition. Preferably, the active ingredients used in the inventive compositions are prophylactic or therapeutic active ingredients. Prophylactic or therapeutic active materials which can be used in the present invention are varied. A non-limiting list of such materials includes the
20 following: antibiotics, antitussives, antihistamines, decongestants, alkaloids, mineral supplements, laxatives, antacids, ion exchange resins, anti-cholesterolemics, antiarrhythmics, antipyretics, analgesics, appetite
25 suppressants, expectorants, anti-anxiety agents, anti-ulcer agents, anti-inflammatory substances, coronary dilators, cerebral dilators, peripheral vasodilators, anti-infectives, psycho-tropics, antimanics, stimulants, gastrointestinal agents, sedatives, antidiarrheal preparations, anti-anginal drugs,
30 vasodialators, anti-hypertensive drugs, vasoconstrictors, migraine treatments, antibiotics, tranquilizers, anti-psychotics, antitumor drugs, anticoagulants, antithrombotic